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NEWS 12
         AUG 06
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        AUG 13
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         AUG 20
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
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        AUG 27
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        AUG 27
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        AUG 28
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                 INPADOCDB enhanced with monthly SDI frequency
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         OCT 02
                 CA/CAplus enhanced with pre-1907 records from Chemisches
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ENTRY SESSION
0.21 0.21

FULL ESTIMATED COST

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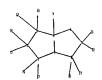
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http://www.cas.org/support/stngen/stndoc/properties.html

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chain nodes :
9  11  12  14  15  16  17  18  19  21  22
ring nodes :
1  2  3  4  5  6  7  8
chain bonds :
1-16  1-17  2-14  2-15  3-11  3-12  4-9  7-21  7-22  8-18  8-19
ring bonds :
1-2  1-5  2-3  3-4  4-5  4-6  5-8  6-7  7-8
exact/norm bonds :
1-16  1-17  2-14  2-15  3-11  3-12  4-9  7-21  7-22  8-18  8-19
exact bonds :
1-2  1-5  2-3  3-4  4-5  4-6  5-8  6-7  7-8
isolated ring systems :
containing 1 :
```

G1:H,Ak

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:CLASS 11:CLASS 12:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 21:CLASS 22:CLASS

L1 STRUCTURE UPLOADED

=> s 11

SAMPLE SEARCH INITIATED 14:13:43 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 162 TO ITERATE

100.0% PROCESSED 162 ITERATIONS

12 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE** `

BATCH **COMPLETE**

33 TO

PROJECTED ITERATIONS:

2477 TO 4003

447

PROJECTED ANSWERS:

L2 12 SEA SSS SAM L1

=> s l1 ful

FULL SEARCH INITIATED 14:13:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2862 TO ITERATE

100.0% PROCESSED 2862 ITERATIONS

270 ANSWERS

SEARCH TIME: 00.00.01

L3 270 SEA SSS FUL L1

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COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST 172.10 172.31

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=> s 13

L4 46 L3

=> s 14 and py=<2003

23955541 PY=<2003

L5 27 L4 AND PY=<2003

=> d 15 ibib abs hitstr hitind 1-27

L5 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:485795 CAPLUS

DOCUMENT NUMBER:

139:261151

TITLE:

New silicon-mediated ring expansion of n-sized

conjugated cycloalkenones into homoallylic n+3

lactones

AUTHOR(S):

Hatcher, Mark A.; Borstnik, Kristina; Posner, Gary

Η.

CORPORATE SOURCE:

School of Arts and Sciences, Department of

II

Chemistry,

The Johns Hopkins University, Baltimore, MD, 21218,

USA

Ι

SOURCE:

Tetrahedron Letters (2003), 44(29),

5407-5409

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER:

Elsevier Science Ltd.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 139:261151

GΙ

AB Silicon nucleophilic β -addition to various 2-cycloalkenones, followed ultimately by mild and rapid α -alkylation of the corresponding cycloalkanone enolates using diverse epoxides and BF3·OEt2, produces useful γ -lactols, e.g., I, and γ -hydroxy ketones. Hypervalent iodine-promoted oxidative fragmentation then yields

regiospecifically unsatd., 3-atom ring expanded, 8-10 membered homoallylic

lactones, e.g., II, with good control of alkene geometry.

IT 600734-94-9P 600734-95-0P 600734-96-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(ring enlargement of cycloalkenones into homoallylic lactones via silylated intermediates and hypervalent iodine-promoted oxidative fragmentation)

RN 600734-94-9 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol, hexahydro-2-(2-phenylethyl)-4-(trimethylsilyl)-, (3aR,4R)-rel- (CA INDEX NAME)

Relative stereochemistry.

RN 600734-95-0 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol,

2-[2-[[(1,1-dimethylethyl)dimethylsilyl]oxy] ethyl]hexahydro-4-(trimethylsilyl)-, (3aR,4R)-rel- (CA INDEX NAME)

Relative stereochemistry.

RN 600734-96-1 CAPLUS

CN 6aH-Cyclopenta[b]furan-6a-ol, 2-butylhexahydro-4-(trimethylsilyl)-, (3aR,4R)-rel- (CA INDEX NAME)

Relative stereochemistry.

CC 27-21 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 26

IT 55942-21-7P 600734-81-4P 600734-83-6P 600734-82-5P 600734-84-7P 600734-86-9P 600734-85-8P 600734-93-8P 600734-94-9P 600734-95-0P 600734-96-1P 600735-00-0P 600735-01-1P

600735-02-2P 600735-04-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(ring enlargement of cycloalkenones into homoallylic lactones via silylated intermediates and hypervalent iodine-promoted oxidative fragmentation)

REFERENCE COUNT:

17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR

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RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L5 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:716217 CAPLUS

DOCUMENT NUMBER: 137:247595

TITLE:

Preparation of bicyclooxaoctanes and

bicyclooxaoctenes

as optical resolving agents and method for optical

resolution of alcohols using said agents

INVENTOR(S): Nemoto, Hisao; Shibuya, Masayuki

PATENT ASSIGNEE(S): Zeon Corporation, Japan SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2 Patent

DOCUMENT TYPE:

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	WO 2002072505	A1	20020919	WO 2002-JP1644	20020225
<					

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

EP 1364933 Α1 20031126 EP 2002-700734 20020225 <--

AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR JP 3901093 B2 20070404 JP 2002-571427 20020225 US 2004077098 Α1 20040422 US 2003-468887 20030826 US 2007155994 Α1 20070705 US 2007-683322 20070307 PRIORITY APPLN. INFO.: JP 2001-50958 20010226 WO 2002-JP1644 20020225 US 2003-468887 A3 20030826

OTHER SOURCE(S):

MARPAT 137:247595

OR10 R1 R2 R3 R4 R9 R5 R6

Ι

AB This document discloses : an optical resolving agent comprising at least

one of compds. represented by the formulas I and II (R1 to R8 each represents hydrogen or C1-20 alkyl; R9 represents optionally substituted

C1-20 alkyl, optionally substituted C1-20 alkenyl, formyl, or acyl; and R10 represents C1-6 alkyl; provided that the mol. represented by the formula I is of the cis configuration with respect to R9 and OR10); and a

ΙI

method for optically resolving an alc. (R11) (R12) (R13) COH (R11, R12, and

R13 each represents hydrogen or optionally substituted C1-20 alkyl, provided that at least one of R11, R12, and R13 is not hydrogen). The method of optical resolution is highly suitable for general purposes. By the

title method, a mixture of optical isomers of any of various alcs. can be

optically resolved easily and industrially advantageously. IT 461025-78-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resolution of alcs. using said agents) RN 461025-78-5 CAPLUS

CN 2H-Cyclopenta[b] furan, hexahydro-6a-methoxy-3a-(2-propen-1-yl)- (CA INDEX

NAME)

IT 461025-70-7P 461025-71-8P 461025-72-9P 461025-73-0P 461025-74-1P 461025-75-2P

461025-76-3P 461025-77-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resolution of alcs. using said agents)

RN 461025-70-7 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-carboxaldehyde, hexahydro-6a-methoxy- (9CI) (CA

INDEX NAME)

RN 461025-71-8 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-methanol, hexahydro-6a-methoxy- α -phenyl-(9CI) (CA INDEX NAME)

RN 461025-72-9 CAPLUS

CN Methanone, (hexahydro-6a-methoxy-3aH-cyclopenta[b]furan-3a-yl)phenyl-(9CI) (CA INDEX NAME)

RN 461025-73-0 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-methanol, hexahydro-6a-methoxy- α , α -diphenyl- (9CI) (CA INDEX NAME)

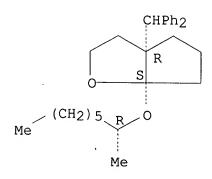
RN 461025-74-1 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-methoxy- (9CI) (CA

INDEX NAME)

RN 461025-75-2 CAPLUS

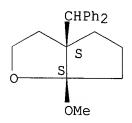
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methylheptyl]oxy]-, (3aR,6aS)- (9CI) (CA INDEX NAME)



RN 461025-76-3 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-methoxy-, (3aS,6aS)- (9CI) (CA INDEX NAME)

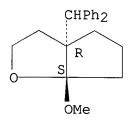
Absolute stereochemistry. Rotation (-).



RN 461025-77-4 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-methoxy-, (3aR,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resoln. of alcs. using said agents)

RN 461025-41-2 CAPLUS

CN 2H-Cyclopenta[b] furan, $6a-[(3\beta,5\alpha)-cholestan-3-yloxy]-3a-(diphenylmethyl) hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)$

Absolute stereochemistry. Rotation (-).

RN 461025-42-3 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[(1R)-1-methylbutoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

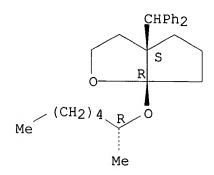
RN 461025-43-4 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methylpentyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

RN 461025-44-5 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methylhexyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

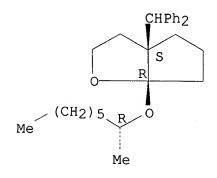
Absolute stereochemistry.



RN 461025-45-6 CAPLUS

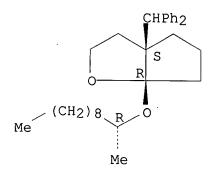
CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methylheptyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 461025-46-7 CAPLUS

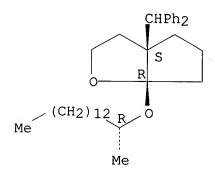
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methyldecyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)



RN 461025-47-8 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-methyltetradecyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

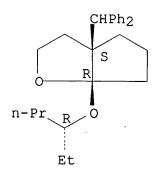
Absolute stereochemistry.



RN 461025-48-9 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[(1R)-1-ethylbutoxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

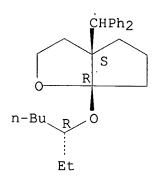
Absolute stereochemistry.



RN 461025-49-0 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[[(1R)-1-ethylpentyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

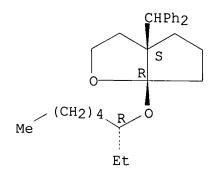
Absolute stereochemistry.



RN 461025-50-3 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[[(1R)-1-ethylhexyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

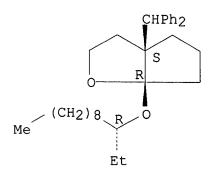
Absolute stereochemistry.



RN 461025-51-4 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[[(1R)-1-ethyldecyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

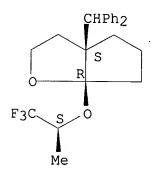
Absolute stereochemistry.



RN 461025-52-5 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[(1S)-2,2,2-trifluoro-1-methylethoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

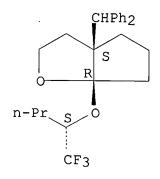
Absolute stereochemistry.



RN 461025-53-6 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[(1S)-1-(trifluoromethyl)butoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 461025-54-7 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-(trifluoromethyl)pentyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

RN 461025-55-8 CAPLUS

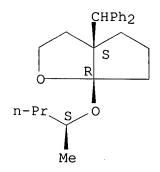
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-(trifluoromethyl)hexyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 461025-56-9 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[(1S)-1-methylbutoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



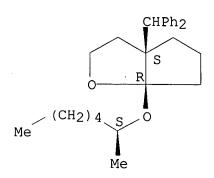
RN 461025-57-0 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-methylpentyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

RN 461025-58-1 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-methylhexyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

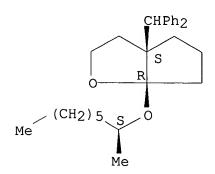
Absolute stereochemistry.



RN 461025-59-2 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-methylheptyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 461025-60-5 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-methyldecyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 461025-61-6 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1S)-1-methyltetradecyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 461025-62-7 CAPLUS

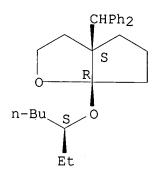
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)-6a-[(1S)-1-ethylbutoxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 461025-63-8 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[[(1S)-1-ethylpentyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

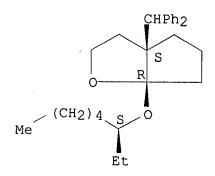
Absolute stereochemistry.



RN 461025-64-9 CAPLUS

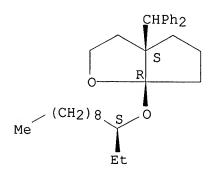
CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)-6a-[[(1S)-1-ethylhexyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 461025-65-0 CAPLUS

CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)-6a-[[(1S)-1-ethyldecyl]oxy]hexahydro-, (3aS,6aR)- (9CI) (CA INDEX NAME)



RN 461025-66-1 CAPLUS

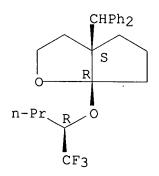
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[(1R)-2,2,2-trifluoro-1-methylethoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 461025-67-2 CAPLUS

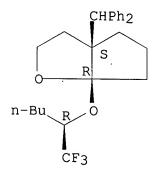
CN 2H-Cyclopenta[b] furan, 3a-(diphenylmethyl)hexahydro-6a-[(1R)-1-(trifluoromethyl)butoxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 461025-68-3 CAPLUS

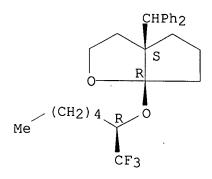
CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-(trifluoromethyl)pentyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)



RN 461025-69-4 CAPLUS

CN 2H-Cyclopenta[b]furan, 3a-(diphenylmethyl)hexahydro-6a-[[(1R)-1-(trifluoromethyl)hexyl]oxy]-, (3aS,6aR)- (9CI) (CA INDEX NAME)

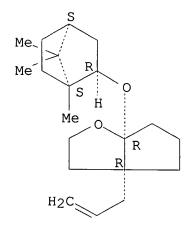
Absolute stereochemistry.



RN 461025-87-6 CAPLUS

CN 2H-Cyclopenta[b]furan, hexahydro-3a-(2-propenyl)-6a-[[(1S,2R,4S)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]oxy]-, (3aR,6aR)- (9CI) (CA INDEX NAME)

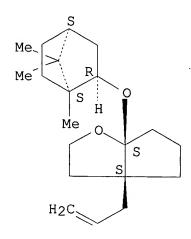
Absolute stereochemistry. Rotation (-).



RN 461031-95-8 CAPLUS

CN 2H-Cyclopenta[b]furan, hexahydro-3a-(2-propenyl)-6a-[[(1S,2R,4S)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]oxy]-, (3aS,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IC ICM C07B057-00

ICS C07C031-12; C07C031-125; C07C031-38; C07C029-74; C07M007-00

CC 27-6 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 21, 80

67-56-1, Methanol, reactions IT75-36-5, Acetyl chloride 80-97-7 100-58-3, Phenylmagnesium bromide 123-96-6, 2-Octanol 360-33-8 374-01-6 433-24-9 464-45-9 543-49-7, 2-Heptanol 589-82-2, 3-Heptanol 589-98-0, 3-Octanol 623-37-0, 3-Hexanol 626 - 93 - 7, 1653-30-1, 2-Undecanol 2-Hexanol 1653-34-5, 2-Pentadecanol

5978-70-1

6032-29-7, 2-Pentanol 10203-30-2, 3-Dodecanol 80768-53-2

461025-78-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resolution of alcs. using said agents)

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resolution of alcs. using said agents)

461025-86-5P 461025-87-6P 461031-95-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of bicyclooxaoctanes and bicyclooxaoctenes as optical resolving

agents and method for optical resolution of alcs. using said agents)

REFERENCE COUNT:

1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L5 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:526623 CAPLUS

DOCUMENT NUMBER: 137:384437

TITLE: Manganese(III) acetate-mediated alkylation of

1,3-dicarbonyls to form tricarbonyl compounds

bearing

a quaternary carbon centre

AUTHOR(S): Bar, Gregory; Parsons, Andrew F.; Thomas, C. Barry

CORPORATE SOURCE: Department of Chemistry, University of York,

Heslington, YO10 5DD, UK

SOURCE: Synlett (2002), (7), 1069-1072

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:384437

AB 1,3-Dicarbonyl compds. including Et 2-methylacetoacetate can be

efficiently alkylated with enol ethers or enol esters in the presence of

manganese(III) acetate. These intermol. radical addition reactions
can be

used to form sterically congested quaternary carbon centers in excellent

yield (81-97%). For example, Et 2-methylacetoacetate was reacted with Bu

vinyl ether in the presence of manganese(III) acetate dihydrate and copper(II) acetate monohydrate to give 92% Et 2-methyl-2-(oxoethyl)acetoacetate.

IT 475661-17-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 475661-17-7 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-carboxylic acid,

hexahydro-6a-hydroxy-2-methyl-,

ethyl ester, (3aR,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Eto O Me Me S OH Hylm lands

CC 21-2 (General Organic Chemistry) ΙT 24810-58-0P 111400-47-6P 111400-48-7P 287724-55-4P 475661-08-6P 475661-09-7P 475661-11-1P 475661-12-2P 475661-13-3P 475661-14-4P 475661-15-5P 475661-16-6P 475661-17-7P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of) REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE **FORMAT** L5ANSWER 4 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2001:527053 CAPLUS DOCUMENT NUMBER: 135:272585 TITLE: The addition of 2-oxido-2-cyclopenten-1-ylium to some olefins and dienes in 2,2,2-trifluoroethanol AUTHOR(S): Leitich, Johannes; Heise, Ingeborg CORPORATE SOURCE: Max-Planck-Institut fur Strahlenchemie, Mulheim a. d. Ruhr, 45470, Germany SOURCE: European Journal of Organic Chemistry (2001), (14), 2707-2718 CODEN: EJOCFK; ISSN: 1434-193X PUBLISHER: Wiley-VCH Verlag GmbH DOCUMENT TYPE: Journal LANGUAGE: English OTHER SOURCE(S): CASREACT 135:272585 AΒ The title reaction has been studied with 2-methoxypropene, (E)-cyclooctene, ethoxyethene, 1,3-cyclopentadiene, 3methylenecyclohexene, styrene and isoprene as the olefinic substrates. This sequence is one of decreasing reactivity of the substrates towards 2-oxido-2-cyclopenten-1-ylium (1) if [4 + 3] cycloaddn. (the prevailing reaction in the case of cyclopentadiene and isoprene) is ignored. reactivity encompasses: (a) the formation of intermediate 1,5-dipoles, which in the majority of cases give rise to a multitude of products including many of higher mol. mass, and (b) two types of ene reactions, dubbed "ene-type 1" and "ene-type 2". Type 1, in which the migrating hydrogen atom is abstracted from 1, is ubiquitous (except with 2-methoxypropene) but is always a minor reaction; type 2, in which the migrating hydrogen atom is transferred to 1, was encountered only in the cases of 3-methylenecyclohexene, in which it is a major reaction path, and isoprene. Both types were found to be slightly concerted. In this context, we observed an effect which we have dubbed "dipolar diversion of a concerted reaction". In general, those substrates incapable of forming [4

+ 3] cycloadducts gave complicated mixts., with the exception of two

compds., which were found to give one predominant product with 1. first of these is the trans-fixed 1,3-diene 3-methylenecyclohexene, which

gave the ene-type 2 adduct, while the second is the most nucleophilic substrate, 2-methoxypropene, which gave a mixture of four adducts (two pairs

of epimers), all of which gave a diketone on hydrolysis.

IT 364058-27-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

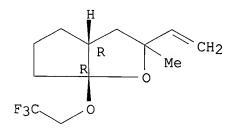
(the addition of 2-oxido-2-cyclopenten-1-ylium to some olefins and dienes

in 2,2,2-trifluoroethanol)

364058-27-5 CAPLUS RN

2H-Cyclopenta[b] furan, 2-ethenylhexahydro-2-methyl-6a-(2,2,2-CN trifluoroethoxy) -, (3aR, 6aR) -rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 22-4 (Physical Organic Chemistry)

RL: SPN (Synthetic preparation); PREP (Preparation) (the addn. of 2-oxido-2-cyclopenten-1-ylium to some olefins and dienes.

in 2,2,2-trifluoroethanol)

REFERENCE COUNT: THERE ARE 59 CITED REFERENCES AVAILABLE FOR

THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 5 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1998:307641 CAPLUS

DOCUMENT NUMBER:

129:27868

TITLE:

Intramolecular bicyclization of

hydroxypentynyliodonium triflate derivatives to furnish cyclopentannelated tetrahydrofurans: the

first

examples of cyclopentene formation following

alkoxide

addition to alkynyliodonium salts

AUTHOR(S):

Feldman, Ken S.; Bruendl, Michelle M.

CORPORATE SOURCE:

Chem. Dep., Pennsylvania State Univ., University

Park,

PUBLISHER:

PA, 16802, USA SOURCE: Tetrahedron Let

Tetrahedron Letters (1998), 39(19),

2911-2914

CODEN: TELEAY; ISSN: 0040-4039

Elsevier Science Ltd.

DOCUMENT TYPE: LANGUAGE:

Journal English

OTHER SOURCE(S):

CASREACT 129:27868

GI

AB Several hydroxyalkynyliodonium triflates such as I can be cyclized with KNTMS2 to provide cyclopentannelated THF derivs. such as II in modest to

good yields. The diastereoselectivity of C-H insertion by the intermediate carbene is better than that observed with the corresponding

tosylamidoalkynyliodonium triflates. Product lability and an electronic

mismatch between the alkoxide nucleophile and iodonium electrophile likely

contribute to the modest yields.

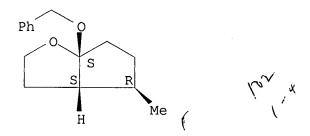
IT 208046-70-2P 208046-72-4P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of cyclopenteno- and cyclopentanotetrahydrofurans by diastereoselective cyclization of hydroxypentylalkynyliodonium triflates)

RN 208046-70-2 CAPLUS

CN 2H-Cyclopenta[b] furan, hexahydro-4-methyl-6a-(phenylmethoxy)-, (3aR,4S,6aR)-rel- (9CI) (CA INDEX NAME)

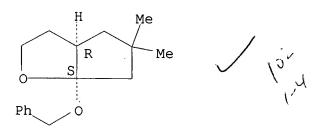
Relative stereochemistry.



RN 208046-72-4 CAPLUS

CN 2H-Cyclopenta[b] furan, hexahydro-5,5-dimethyl-6a-(phenylmethoxy)-, (3aR,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 27-6 (Heterocyclic Compounds (One Hetero Atom))

IT 208046-61-1P 208046-70-2P 208046-71-3P 208046-72-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of cyclopenteno- and cyclopentanotetrahydrofurans by diastereoselective cyclization of hydroxypentylalkynyliodonium

triflates)

REFERENCE COUNT:

THERE ARE 14 CITED REFERENCES AVAILABLE FOR 14

THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 6 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:253956 CAPLUS

DOCUMENT NUMBER: 126:293230

TITLE: Sequenced Reactions with Samarium(II) Iodide.

Sequential Nucleophilic Acyl Substitution/Ketyl

Olefin

Coupling Reactions for the Preparation of Oxygen

Heterocycles

AUTHOR(S):

Molander, Gary A.; Harris, Christina R. CORPORATE SOURCE: Department of Chemistry and Biochemistry,

University

PUBLISHER:

SOURCE:

of Colorado, Boulder, CO, 80309-0215, USA Journal of Organic Chemistry (1997), 62(9),

2944-2956

CODEN: JOCEAH; ISSN: 0022-3263

American Chemical Society

DOCUMENT TYPE:

Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 126:293230

GΙ

AB Samarium(II) iodide has been employed to promote a sequential intramol. nucleophilic acyl substitution/intramol. ketyl olefin coupling cyclization

sequence to provide bicyclic, tricyclic, and spiro-fused oxygen heterocycles in excellent yield and with high diastereoselectivity.

E.g.,

treating EtO2CCH(OCH2CH2CH2I)CH2CH2CH:CH2 with SmI2 in THF/HMPA gave 61% I

as a single diastereomeric product.

IT 189046-68-2P 189047-29-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of oxygen heterocycles by a samarium iodide promoted intramol.

nucleophilic acyl substitution/intramol. ketyl olefin coupling cyclization sequence)

RN 189046-68-2 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-ol, hexahydro-3-methyl-6a-(2-propenyloxy)-, $(3\alpha, 3a\beta, 6a\beta)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 189047-29-8 CAPLUS

CN 3aH-Cyclopenta[b] furan-3a-ol, hexahydro-6a-methoxy-3-methyl-, $(3\alpha, 3a\beta, 6a\beta)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

CC 27-1 (Heterocyclic Compounds (One Hetero Atom))

ΙT 189046-57-9P 189046-59-1P 189046-61-5P 189046-62-6P

189046-64-8P

189046-68-2P 189046-72**-**8P 189046-74-0P 189046-77-3P

189046-82-0P 189046-84-2P 189046-86-4P 189046-91-1P

189047-24-3P

189047-27-6P 189047-28-7P 189047-29-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of oxygen heterocycles by a samarium iodide promoted intramol.

nucleophilic acyl substitution/intramol. ketyl olefin coupling cyclization sequence)

REFERENCE COUNT:

85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR

THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L5ANSWER 7 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:535181 CAPLUS

DOCUMENT NUMBER: 125:300172

TITLE: Variations on radical cascades of vinyl radicals

generated from (bromomethyl)dimethylsilyl propargyl

ethers

AUTHOR(S): Fensterbank, Louis; Dhimane, Anne-Lise; Wu,

Sashuang;

Lacote, Emmanuel; Bogen, Stephane; Malacria, Max CORPORATE SOURCE:

Lab. Chim. Org. Synthese, Univ. P. et M. Curie,

Paris,

or

75252, Fr.

SOURCE: Tetrahedron (1996), 52(35), 11405-11420

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER:

Elsevier DOCUMENT TYPE: Journal

LANGUAGE: English

AΒ Vinyl radicals generated from (bromomethyl)dimethylsilyl propargyl ethers

have been efficiently engaged in cascades of radical cyclizations. Through the enchainment of 5-exo-dig-5- $(\pi$ -endo)-exo-trig-6-endo-trig

 $5-\text{exo-dig-}5-(\pi-\text{endo})-\text{exo-trig-}6-\text{exo-trig}$ radical processes, hydrindene and a steroid skeleton could be assembled. Appending on the alkyne a suitable chain bearing a dioxolane for 1,5-radical translocations proved

also very rewarding since a very diastereoselective access to cyclopentanone derivs. could be devised.

ΙT 182567-18-6P 182567-19-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

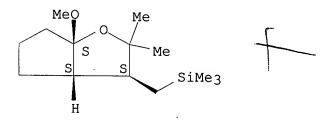
(preparation and radical cyclization of (bromomethyl)dimethylsilyl propargyl

ethers)

RN 182567-18-6 CAPLUS

Silane, [(hexahydro-6a-methoxy-2,2-dimethyl-2H-cyclopenta[b]furan-3-CN yl)methyl]trimethyl-, $(3\alpha, 3a\alpha, 6a\alpha)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

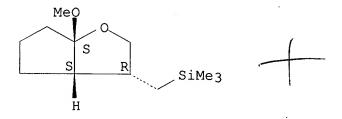


182567-19-7 CAPLUS RN

CN Silane,

[(hexahydro-6a-methoxy-2H-cyclopenta[b]furan-3-yl)methyl]trimethyl-, $(3\alpha, 3a\beta, 6a\beta)$ – (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 21-2 (General Organic Chemistry)

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and radical cyclization of (bromomethyl)dimethylsilyl propargyl

ethers)

L5ANSWER 8 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:141525 CAPLUS

DOCUMENT NUMBER: 122:160385

TITLE:

A new alkenyl ether giving acetal with

stereospecific

manner

AUTHOR(S):

CORPORATE SOURCE:

Molecular

Nemoto, Hisao

Dep. Applied Molecular Sci., Okazaki Inst.

SOURCE:

Science, Okazaki, Aiichi, 444, Japan

Tetrahedron Letters (1994), 35(42), 7785-8

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: DOCUMENT TYPE:

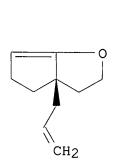
LANGUAGE:

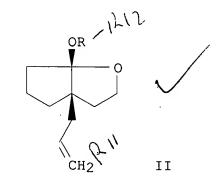
OTHER SOURCE(S):

GΙ

Elsevier Journal English

CASREACT 122:160385





AB Acetalization of the alkenyl ether $(\pm)-3$, 3a, 4, 5-tetrahydro-3a-(2propenyl) -2H-cyclopenta[b] furan [(\pm)-I] gave stereospecifically $cis-(\pm)$ -hexahydro-6a-methoxy-3a-(2-propenyl)-2H-cyclopenta[b] furan; the stereochem. was proven by x-ray anal.

ΙT 161394-51-0

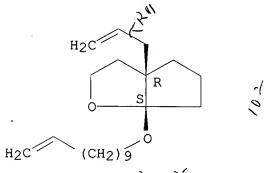
> RL: RCT (Reactant); RACT (Reactant or reagent) (deprotection of 6a-(alkoxy)benzo[b]furan)

161394-51-0 CAPLUS RN

Ι

2H-Cyclopenta[b]furan, hexahydro-3a-(2-propenyl)-6a-(10-undecenyloxy)-, CN cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 161394-44-1P 161394-45-2P 161394-46-3P

161394-47-4P 161394-48-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

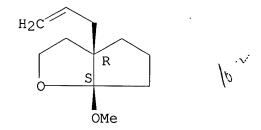
 $(\texttt{preparation of 6a-(alkoxy)benzo[b]} \ furan \ by \ stereoselective \ acetalization \ of$

3a-(propenyl)cyclopenta[b]furan)

RN 161394-44-1 CAPLUS

CN 2H-Cyclopenta[b]furan, hexahydro-6a-methoxy-3a-(2-propenyl)-, (3aR,6aS)-rel- (9CI) (CA INDEX NAME)

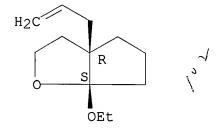
Relative stereochemistry.



RN 161394-45-2 CAPLUS

CN 2H-Cyclopenta[b]furan, 6a-ethoxyhexahydro-3a-(2-propenyl)-, cis- (9CI) (CA INDEX NAME)

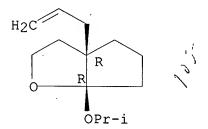
Relative stereochemistry.



RN 161394-46-3 CAPLUS

CN 2H-Cyclopenta[b] furan, hexahydro-6a-(1-methylethoxy)-3a-(2-propenyl)-, cis- (9CI) (CA INDEX NAME)

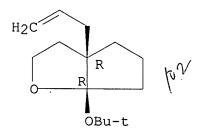
Relative stereochemistry.



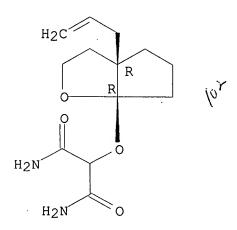
RN 161394-47-4 CAPLUS

CN 2H-Cyclopenta[b] furan, 6a-(1,1-dimethylethoxy)hexahydro-3a-(2-propenyl)-, cis-(9CI) (CA INDEX NAME)

Relative stereochemistry.



Relative stereochemistry.



CC

L5 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 1994:270951 CAPLUS

27-6 (Heterocyclic Compounds (One Hetero Atom))

DOCUMENT NUMBER:

120:270951

TITLE:

Total synthesis of (+)-13-ethyl-3-methoxygona-

1,3,5,9(11)-tetran-17-one via the tandem

Claisen-ene

strategy

AUTHOR(S):

Groen-Piotrowska, E. M.; Groen, M. B.

CORPORATE SOURCE: SOURCE:

Organon Sci. Dev. Group, Oss, 5340 BH, Neth. Recueil des Travaux Chimiques des Pays-Bas (

1993), 112(12), 627-34

CODEN: RTCPA3; ISSN: 0165-0513

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 120:270951

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A total synthesis of the title compound I, a potential precursor of the progestagens desogestrel and 3-ketodesogestrel, is described. The backbone of the steroid was assembled by condensation of 1,2-dihydronaphthalene II with 6-nonen-2-ynoic acid III (TBDMS = tert-butyldimethylsilyl) and subsequent Claisen rearrangement of the resulting enol ether to give disecosteroid IV. Heating of IV at 170° gave a 1:1 mixture of 9,11-secosteroids V and its 13 α epimer. The 13 β -epimer V was converted into 9,11-secogona-1,3,5(10)-triene-9,17-dione VI (X = Br), which was treated with

triphenylphosphine

under high pressure conditions (12 kbar, 55°) to give the corresponding phosphonium salt VI (X = P+Ph3 Br-) (VII). The intramol. Wittig reaction of VII proceeded with epimerization at C-8 to give exclusively the 8 α epimer of I, which underwent isomerization upon treatment with acid to the title compound I.

IT 154619-42-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation and deacetalization-bromination of)

RN 154619-42-8 CAPLUS

CN 1(2H)-Naphthalenone,

2-(3a-ethylhexahydro-6a-methoxy-2H-cyclopenta[b]furan-4-yl)-3,4-dihydro-6-methoxy-, [3aS-[3a α ,4 α (S*),6a α]]-

(9CI) (CA INDEX NAME)

IT 154726-64-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and isomerization of)

RN 154726-64-4 CAPLUS

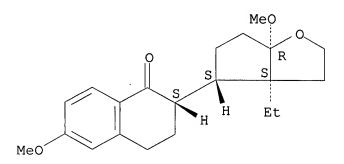
CN 1(2H)-Naphthalenone,

2-(3a-ethylhexahydro-6a-methoxy-2H-cyclopenta[b]furan-

4-y1)-3,4-dihydro-6-methoxy-, [3aS-[3a α ,4 α (R*),6a α]]-

(9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 32-2 (Steroids)

IT 154619-42-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and deacetalization-bromination of)

IT 154726-64-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and isomerization of)

L5 · ANSWER 10 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:6923 CAPLUS

DOCUMENT NUMBER: 114:6923

TITLE: Baeyer-Villiger oxidation of (3aS and

3aR, 7aS) -1, 2, 3a, 4, 5, 6, 7, 7a-octahydro-7a-

methyl[1H]indene-1,5-diones. Synthesis of a chiral

synthon for total synthesis of 14β -estrone

AUTHOR(S): Daniewski, Andrzej Robert; Kiegiel, Jaroslaw CORPORATE SOURCE:

Inst. Org. Chem., Pol. Acad. Sci., Warsaw, 01-224,

Pol.

SOURCE: Bulletin of the Polish Academy of Sciences,

Chemistry

(1989), 37(7-8), 277-81

CODEN: BPACEQ; ISSN: 0239-7285

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:6923

GI

AB Regioselectivity of Baeyer-Villiger oxidation of the title compds. I

(R =

 β -H, α -H) depends on acidity of the reaction medium. accessible I $(R = \beta - H)$ was transformed into synthon II, which can be used for total synthesis of 14β -estrone.

IT 130467-39-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

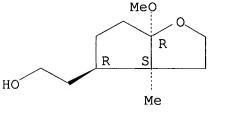
(Reactant or reagent)

(preparation and dehydration of)

130467-39-9 CAPLUS RN

CN 2H-Cyclopenta[b]furan-4-ethanol, hexahydro-6a-methoxy-3a-methyl-, $[3aS-(3a\alpha, 4\beta, 6a\alpha)]-(9CI)$ (CA INDEX NAME)

Absolute stereochemistry.



IT 130467-38-8P

Page 37

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

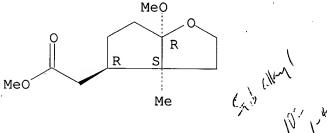
(Reactant or reagent)

(preparation and hydride reduction of)

RN 130467-38-8 CAPLUS

CN 2H-Cyclopenta[b] furan-4-acetic acid, hexahydro-6a-methoxy-3a-methyl-, methyl ester, $[3aS-(3a\alpha, 4\beta, 6a\alpha)]-(9CI)$ (CA INDEX NAME)

Absolute stereochemistry.



IT 130467-40-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

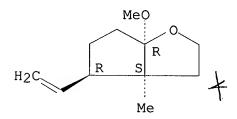
(Reactant or reagent)

(preparation and ring cleavage of)

RN 130467-40-2 CAPLUS

CN 2H-Cyclopenta[b] furan, 4-ethenylhexahydro-6a-methoxy-3a-methyl-, [3aS-(3a α , 4 β , 6a α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 32-3 (Steroids)

IT 130467-39-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and dehydration of)

IT 130467-38-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and hydride reduction of)

IT 130467-40-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

```
(Reactant or reagent)
        (preparation and ring cleavage of)
L5
     ANSWER 11 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
                         1989:594134 CAPLUS
DOCUMENT NUMBER:
                         111:194134
TITLE:
                         Synthesis of
2-[5,5-(ethylenedioxy)-1-methylcyclopent-
                         2-en-1-yl]ethanol, and some 2H-cyclopenta[b]furan
                         derivatives formed by intramolecular displacement
AUTHOR(S):
                         Campbell, Michael; Collins, David J.; James,
Alison M.
CORPORATE SOURCE:
                         Chem. Dep., Monash Univ., Clayton, 3168, Australia
SOURCE:
                         Australian Journal of Chemistry (1989),
                         42(1), 17-35
                         CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE:
                         Journal
LANGUAGE:
                         English
OTHER SOURCE(S):
                         CASREACT 111:194134
     Exchange dioxolanation of
2-methyl-2-(prop-2-enyl)cyclopentane-1,3-dione
     gave 3,3-(ethylenedioxy)-2-methyl-2-(prop-2-enyl)cyclopentan-1-one,
which,
     upon reduction and esterification, afforded the epimeric
3,3-(ethylenedioxy)-2-
    methyl-2-(prop-2-enyl)cyclopent-1-yl benzoates (I). Oxidative
cleavage of
     the terminal double bond in I, followed by NaBH4 reduction yielded
     3,3-(ethylenedioxy)-2-(2-hydroxyethyl)-2-methylcyclopent-1-yl benzoate
     (II) which underwent acid-catalyzed rearrangement to
6a-(2-hydroxyethoxy)-
     3a-methylhexahydrocyclopenta[b]furan-4-yl benzoate. Flash vacuum
     pyrolysis of the tert-butyldimethylsilyl ether derived from the hydroxy
     acetal II afforded 3-[2-(tert-butyldimethylsilyloxy)ethyl]-4,4-
     (ethylenedioxy)-3-methylcyclopent-1-ene which upon selective cleavage
of
     the silyl ether group gave title compound (III). Reaction of the
mesylate
     of III with LiBr or LiI in THF at 50-5° for several h yielded some
     of the corresponding 3-(2-haloethyl) compds., but gave mainly the
     rearranged 6a-(2-haloethoxy)-3a-methyl-3,3a,6,6a-tetrahydro-2H-
     cyclopenta[b]furans.
ΙT
     123434-61-7P 123434-86-6P 123434-87-7P
     123485-37-0P 123485-38-1P
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (preparation and spectra of)
RN
     123434-61-7 CAPLUS
CN
     2H-Cyclopenta[b] furan-4-ol, hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-,
     4-acetate, (3a\alpha, 4\beta, 6a\alpha) - (9CI) (CA INDEX NAME)
```

RN 123434-86-6 CAPLUS

CN 2H-Cyclopenta[b]furan-4-ol, hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-, 4-benzoate, (3a α ,4 α ,6a α)- (9CI) (CA INDEX NAME)

RN 123434-87-7 CAPLUS

CN 2H-Cyclopenta[b] furan-4-ol,

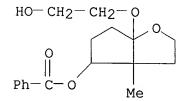
6a, 6'a-[1, 2-ethanediylbis(oxy)]bis[hexahydro-3a-methyl-, dibenzoate (9CI) (CA INDEX NAME)

RN 123485-37-0 CAPLUS

CN 2H-Cyclopenta[b]furan-4-ol, hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-, 4-acetate, $(3a\alpha, 4\alpha, 6a\alpha)$ - (9CI) (CA INDEX NAME)

RN 123485-38-1 CAPLUS

CN 2H-Cyclopenta[b] furan-4-ol, hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-, 4-benzoate, (3aα, 4β, 6aα)- (9CI) (CA INDEX NAME)



CC 24-4 (Alicyclic Compounds)

Section cross-reference(s): 28, 32

IT 123434-61-7P 123434-62-8P 123434-63-9P 123434-64-0P

123434-68-4P 123434-72-0P 123434-78-6P 123434-79-7P

123434-81-1P

123434-86-6P 123434-87-7P 123434-88-8P

123485-37-0P 123485-38-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)

L5 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:477279 CAPLUS

DOCUMENT NUMBER: 111:77279

TITLE: Reactivity of unsaturated ketones and oxiranes in

the

iodocyclization reaction

AUTHOR(S): Kupchik, I. P.; Koryak, E. B.; Gevaza, Yu. I.;

Staninets, V. I.

CORPORATE SOURCE: Inst. Org. Khim., Kiev, USSR

SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (

1988), 54(11), 1180-3

CODEN: UKZHAU; ISSN: 0041-6045

DOCUMENT TYPE: Journal LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 111:77279

AB Rate consts. were determined for the iodocyclization of the title compds. in

aqueous NaHCO3 or phosphate buffer. The reactivities decreased in the following order: 2-(2-methyl-2-butenyl)cyclohexanone >

2-methyl-2-hepten-6-one > 2-allylcyclohexanone > 2-allyl-2-hydroxy-4-pentenol > 1-hexen-5-one > 2-phenyl-2-hydroxy-4-pentenol >

HO O Me

CC 22-5 (Physical Organic Chemistry)
IT 73859-59-3P 90201-25-5P 121949-38-0P 121949-39-1P 121949-40-4P
RL: SPN (Synthetic preparation); PREP (Preparation)

L5 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

(preparation of)

1988:221943 CAPLUS

DOCUMENT NUMBER:

108:221943

TITLE:

A new route to a chiral synthon for the total

synthesis of estrone

AUTHOR(S):

Daniewski, Andrzej Robert; Kiegiel, Jaroslaw Inst. Org. Chem., Pol. Acad. Sci., Warsaw,

CORPORATE SOURCE:

PL-01-224,

Pol.

SOURCE:

Synthesis (1987), (8), 705-8 CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE:

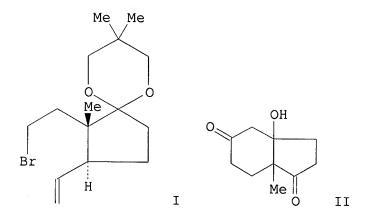
LANGUAGE:

Journal English

OTHER SOURCE(S):

CASREACT 108:221943

GI



AB An improved synthesis of chiral synthon C (I) for estrone from chiral perhydroindandione II was described.

IT 114611-49-3P 114611-50-6P 114611-51-7P

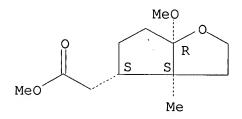
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as intermediate in improved synthesis of chiral estron

synthon)

RN 114611-49-3 CAPLUS

CN 2H-Cyclopenta[b] furan-4-acetic acid, hexahydro-6a-methoxy-3a-methyl-, methyl ester, [3aS-(3aα, 4α, 6aα)]- (9CI) (CA INDEX NAME)

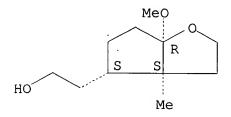
Absolute stereochemistry.



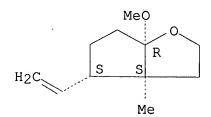
RN 114611-50-6 CAPLUS

CN 2H-Cyclopenta[b] furan-4-ethanol, hexahydro-6a-methoxy-3a-methyl-, [3aS-(3aα, 4α, 6aα)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 114611-51-7 CAPLUS
CN 2H-Cyclopenta[b]furan, 4-ethenylhexahydro-6a-methoxy-3a-methyl-,
 [3aS-(3aα, 4α, 6aα)]- (9CI) (CA INDEX NAME)
Absolute stereochemistry.



CC 32-3 (Steroids) IT 114611-43-7P 114611-46-0P 114611-48-2P 114611-49-3P 114611-50-6P 114611-51-7P 114611-52-8P 114673-85-7P

114611-50-6P 114611-51-7P 114611-52-8P 114673-85-7P RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, as intermediate in improved synthesis of chiral estron

synthon)

L5 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1987:66797 CAPLUS

DOCUMENT NUMBER:

106:66797

TITLE:

Regiospecific generation and alkylation of γ -oxo

 $\alpha\text{-ester}$ enolates. Application to the synthesis

of polycyclopentanoids

AUTHOR(S):

Marino, Joseph P.; Laborde, Edgardo

CORPORATE SOURCE:

Dep. Chem., Univ. Michigan, Ann Arbor, MI, 48109,

USA

SOURCE:

Journal of Organic Chemistry (1987), 52(1),

1-10

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 106:66797

AB A new strategy for [3 + 2] annulation utilizes the combination of a C3 synthon in the form of a γ -oxo α -ester enolate with a C2 Michael acceptor. The enolate synthon is derived from the fluoride-induced desilylation of 2-(silyloxy)cyclopropanecarboxylates. This new methodol. has been applied to the construction of the bicyclo[3.3.0]octane and the tricyclo[6.3.0.02,6]undecane ring systems, the latter by using a reiterative process.

IT 105619-68-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 105619-68-9 CAPLUS

CN 2H-Cyclopenta[b]furan-3-carboxylic acid,

hexahydro-6a-hydroxy-5,5-dimethyl-

2-phenyl-, ethyl ester, $(2\alpha, 3\beta, 3a\beta, 6a\beta)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

CC 24-8 (Alicyclic Compounds)

IT 50891-56-0P 94499-68-0P 94499-69-1P 94499-72-6P 94499-73-7P

94499-74-8P 94499-75-9P 94499-83-9P 105576-31-6P 105619-68-9P 105619-69-0P 105619-70-3P 105619-71-4P

105619-72-5P 105619-73-6P 105619-75-8P 105619-76-9P

105619-77-0P

105619-80-5P 105619-81-6P 105662-70-2P 105662-74-6P

105662-75-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L5 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:437524 CAPLUS

DOCUMENT NUMBER: 103:37524

TITLE: Relative reactivities of representative aldehydes

and

ketones toward trimethylsilyl-substituted

propargylic

boranes

AUTHOR(S): Wang, Kung K.; Liu, Chin

CORPORATE SOURCE: Dep. Chem., West Virginia Univ., Morgantown, WV,

26506, USA

SOURCE: Journal of Organic Chemistry (1985), 50(14),

2578-80

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 103:37524

GI

AB The relative reactivities of aldehyde and ketones toward triethylsilyl-substituted propargylic boranes were determined by competitive

expts. Aldehydes were much more reactive than ketones; cyclohexanone and

Me ketones showed higher reactivities than other ketones; and carboxylate

esters exhibited no significant reactivity. These differences in reactivity allowed selective reaction of an aldehyde group in the presence

of a keto group; an Ac group in the presence of a cyclopentanone group; and a keto group in the presence of a carboxylate group. Thus, reaction

of I with II followed by treatment with NaOH-H2O2 gave III, which tautomerized to IV.

IT 96503-45-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)

RN 96503-45-6 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol,

hexahydro-2-methyl-2-[1-(trimethylsilyl)-1,2propadienyl]- (9CI) (CA INDEX NAME)

$$C = C = CH_2$$

CC 29-4 (Organometallic and Organometalloidal Compounds)

IT 96503-44-5P 96503-45-6P 96503-47-8P 96503-48-9P

96503-49-0P 96503-50-3P 96503-51-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)

ANSWER 16 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1985:167001 CAPLUS

TITLE:

102:167001

Intramolecular Diels-Alder reaction with

furan-diene.

DOCUMENT NUMBER:

1. A novel entry to the BCD-ring system of 11-oxo

steroids

AUTHOR(S):

Van Royen, Luc A.; Mijngheer, Roelant; De Clercq,

Pierre J.

CORPORATE SOURCE:

Lab. Org. Synth., State Univ. Ghent, Ghent, B-9000,

Belg.

SOURCE:

Bulletin des Societes Chimiques Belges (1984

), 93(11), 1019-36

CODEN: BSCBAG; ISSN: 0037-9646

DOCUMENT TYPE:

Journal

LANGUAGE:

HO

English

GΙ

VΙ

AΒ The steroidal BCD-ring system was prepared by intramol. Diels-Alder reaction

of cyclopentylbutenone I (R = SiMe2CMe3) to give isomeric

VII

epoxycyclopentanaphthalenes II and III by kinetic and thermodn. control,

resp. I was prepared from furylcyclopentene IV via regioselectivestereoselective alkylation by BrCH2CO2Me to give the cyclopentaneacetate

V. The dihydro derivative of II underwent ring cleavage in MeOH containing NaOMe

to give the de-A-steroid VI without C-14 epimerization. Other furylcyclopentanes, e.g., VII (R1 = Bu, CO2Et), were prepared and their Diels-Alder cyclizations studied.

IT 95852-76-9P 95910-77-3P 95910-78-4P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 95852-76-9 CAPLUS

CN 2-Propynoic acid,

3-[4-(2-furanyl)hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-2H-cyclopenta[b]furan-2-yl]-, ethyl ester, $(2\alpha, 3a\alpha, 4\alpha, 6a\alpha)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 95910-77-3 CAPLUS CN 2-Propynoic acid,

3-[4-(2-furanyl)hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-2H-cyclopenta[b]furan-2-yl]-, ethyl ester, $(2\alpha, 3a\beta, 4\beta, 6a.b$ eta.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Eto
$$C = C$$
 R R R R R R

RN 95910-78-4 CAPLUS

CN 2-Propynoic acid,

3-[4-(2-furanyl)hexahydro-6a-(2-hydroxyethoxy)-3a-methyl-

2H-cyclopenta[b]furan-2-yl]-, ethyl ester (9CI) (CA INDEX NAME)

 $HO-CH_2-CH_2-O$ Me

CC 32-3 (Steroids)

Section cross-reference(s): 27

ΙT 83662-18-4P 87530-46-9P 95852-74-7P 95852-76-9P

95852-78-1P 95852-79-2P 95852-81-6P 95852-82-7P 95852-83-8P

95852-86-1P 95852-87-2P 95852-89-4P 95852-99-6P 95910-75-1P

95910-77-3P 95910-78-4P 95910-93-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

ANSWER 17 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1982:582043 CAPLUS

DOCUMENT NUMBER:

97:182043

TITLE:

Synthetic approaches to 11-deoxyhomoprostacyclin

analogs

AUTHOR(S):

Dixon, Andrew J.; Taylor, Richard J. K.; Newton,

Roger

CORPORATE SOURCE:

SOURCE:

F.; Wadsworth, Alan H.; Klinkert, Graham

Chem. Dep., Open Univ., Milton Keynes, MK7 6AA, UK

Journal of the Chemical Society, Perkin

Transactions

Organic and Bio-Organic Chemistry (1972-1999) (

1982), (8), 1923-32

CODEN: JCPRB4; ISSN: 0300-922X

DOCUMENT TYPE:

LANGUAGE:

Journal

GΙ

English

$$R^2$$
 R^1 $CH_2CR = CH_2$ (CH_2) $4Me$ (CH_2) $4Me$

AB A number of synthetic approaches to the title compds. are described. The key

intermediates allylcyclopentanones I (R = H, OH, R1R2 = O) (II and III, resp.) were prepared from cyclopent-2-enone using the organocuprate conjugate addition-enolate alkylation reaction. Selective functionalization

of the allylic double bond in II and protected derivs. of alc. I (R = R2 =

 ${\rm H,\ R1}$ = OH) (IV) were attempted using Br in AcOH, NBS in aqueous DMSO, and

 ${\tt I2-Ag2CrO4},$ but these reactions were not useful in the preparation of the title

compds., although a number of interesting observations were made, including

the preparation of the novel tricyclic compound V by sequential trichloroacetylation, iodination-oxidation, and cyclization of IV. The diastereoisomeric deoxyhomoprostacyclins (4-exo-E)-(3'R)-, -(3'S)-, (4-exo-Z)-(3'R)-, and -(3'S)-VI were prepared in 5 steps from III.

IT 83345-30-6P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 83345-30-6 CAPLUS

CN 6aH-Cyclopenta[b]furan-6a-ol, 2-(bromomethyl)-4-[3-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-octenyl]hexahydro-, acetate (9CI) (CA

INDEX .NAME)

CC 26-3 (Biomolecules and Their Synthetic Analogs)

83377-91-7P

Section cross-reference(s): 27

IT 82393-43-9P 82393-44-0P 82393-46-2P 82393-51-9P 82442-97-5P 83345-30-6P 83345-32-8P 83345-34-0P 83345-35-1P 83345-36-2P 83345-39-5P 83345-40-8P 83345-41-9P 83377-89-3P

83377-92-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L5 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

83377-90-6P

1982:69234 CAPLUS

DOCUMENT NUMBER:

96:69234

TITLE:

Synthesis of racemic fomannosin and illudol using a

83377-99-5P

83378-01-2P

biosynthetically patterned common intermediate

AUTHOR(S): Semmelhack, M. F.; Tomoda, Shuji; Nagaoka, Hiroto;

Boettger, Susan D.; Hurst, Kenneth M.

CORPORATE SOURCE:

Dep. Chem., Princeton Univ., Princeton, NJ, 08544,

USA

SOURCE:

Journal of the American Chemical Society (1982

), 104(3), 747-59

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE:

LANGUAGE:

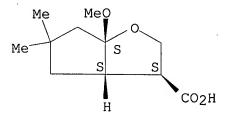
GI

Journal English

AB A total synthesis of (\pm) -fomannosin (I) was achieved via a Diels-Alder reaction of a cyclobutenecarboxylate with a vinylcyclopentene which generates the tricyclic protoilludane skeleton stereoselectively. The

Na

Relative stereochemistry.



RN 79812-99-0 CAPLUS CN 2H-Cyclopenta[b] furan-3-carboxylic acid, hexahydro-6a-methoxy-5,5-dimethyl-, $(3\alpha,3a\beta,6a\beta)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.

IT 79745-74-7P 79812-98-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and saponification of)

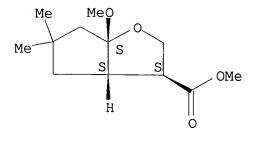
RN 79745-74-7 CAPLUS

CN 2H-Cyclopenta[b] furan-3-carboxylic acid,

hexahydro-6a-methoxy-5,5-dimethyl-

, methyl ester, $(3\alpha, 3a\alpha, 6a\alpha)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.



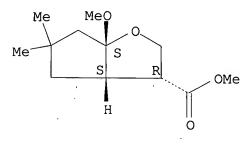
RN 79812-98-9 CAPLUS

CN 2H-Cyclopenta[b] furan-3-carboxylic acid,

hexahydro-6a-methoxy-5,5-dimethyl-

, methyl ester, $(3\alpha, 3a\beta, 6a\beta)$ - (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 79745-76-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and successive dehydrochlorination and cycloaddn. with

ethoxyacetylene)

```
79745-76-9 CAPLUS
RN
CN
     2H-Cyclopenta[b]furan-3-carbonyl chloride, hexahydro-6a-methoxy-5,5-
     dimethyl- (9CI)
                     (CA INDEX NAME)
      MeO
  Me
Me
CC
     30-15 (Terpenes and Terpenoids)
IT
     79813-00-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT
     (Reactant or reagent)
        (preparation and chlorination of)
ΙT
     79745-75-8P 79812-99-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT
     (Reactant or reagent)
        (preparation and neutralization of)
IT
     79745-74-7P 79812-98-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT
     (Reactant or reagent)
        (preparation and saponification of)
ΙT
     79745-76-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and successive dehydrochlorination and cycloaddn. with
        ethoxyacetylene)
L5
     ANSWER 19 OF 27
                      CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
                         1981:83863 CAPLUS
DOCUMENT NUMBER:
                         94:83863
TITLE:
                         Enamine chemistry. XX. Synthesis of furan
                         derivatives by reductive cyclization of enamines
AUTHOR(S):
                         Carlsson, S.; El-Barbary, A. A.; Lawesson, S. O.
CORPORATE SOURCE:
                         Dep. Org. Chem., Univ. Aarhus, Aarhus, DK-8000,
Den.
SOURCE:
                         Bulletin des Societes Chimiques Belges (1980
                         ), 89(8), 643-9
                         CODEN: BSCBAG; ISSN: 0037-9646
DOCUMENT TYPE:
                         Journal .
LANGUAGE:
                         English
OTHER SOURCE(S):
                         CASREACT 94:83863
GI
```

AB Enamines I (R = CHR4CO2R5; R1-R4 = H, Me; R5 = Me, Et) were obtained in 41-68% yield by treating I (R = H) with BrCHR4CO2R5. LiAlH4 reduction of I (R

= CHR4CO2R5) gave the furans II (R6 = pyrrolidino) which were hydrolyzed

to II (R6 = OH). Treatment of II (R6 = pyrrolidino) with oxalic acid-dioxane gave III.

TT 73859-58-2P 76593-95-8P 76593-96-9P 76593-97-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and ring-chain tautomerism of)

RN 73859-58-2 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol, hexahydro- (9CI) (CA INDEX NAME)

RN 76593-95-8 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol, hexahydro-3-methyl- (9CI) (CA INDEX NAME)

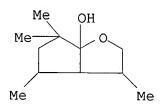
RN 76593-96-9 CAPLUS

CN 6aH-Cyclopenta[b]furan-6a-ol, hexahydro-4,6,6-trimethyl- (9CI) (CA INDEX

NAME)

RN 76593-97-0 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol, hexahydro-3,4,6,6-tetramethyl- (9CI) (CA INDEX NAME)



CC 27-7 (Heterocyclic Compounds (One Hetero Atom))

10198-27-3P ΙT 24804-46-4P 57133-57-0P 66806-73-3P 73859-58-2P 76593-75-4P 76593-76-5P 76593-77-6P 76593-78-7P

76593-79-8P

76593-80-1P 76593-81-2P 76593-82-3P 76593-91-4P 76593-92-5P

76593-93-6P 76593-94-7P 76593-95-8P 76593-96-9P

76593-97-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and ring-chain tautomerism of)

L5ANSWER 20 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:514810 CAPLUS

DOCUMENT NUMBER: 93:114810

TITLE: Transition-metal-catalyzed alkyne cyclizations.

cobalt-mediated total synthesis of dl-estrone

AUTHOR(S): Funk, Raymond L.; Vollhardt, K. Peter C.

CORPORATE SOURCE:

Dep. Chem., Univ. California, Berkeley, CA, 94720,

USA

SOURCE:

Journal of the American Chemical Society (1980

ΙI

), 102(16), 5253-61

CODEN: JACSAT; ISSN: 0002-7863 Journal

DOCUMENT TYPE:

CH

CH₂

LANGUAGE:

English

GΙ

HC≡C H

 R^{1}

Ι

AB Racemic steroids, including estrone, were prepared via cobalt-catalyzed cooligomerization of hexadiyne I with alkynes. Thus, I cyclized with Me3SiC.tplbond.CSiMe3 in the presence of

cyclopentadienylcobaltdicarbonyl

to give estratrienone II (R = R1 = SiMe3), and I cyclized with MeOC.tplbond.CSiMe3 to give II (R = MeO, R1 = SiMe3; R = SiMe3, R1 = MeO)

in low yield. Estrone can be obtained with poor regioselectivity from the

cyclic ethylene ketal of II (R = R1 = SiMe3) by bromination and conversion

of the Br group toa HO group. Selective protodesilylation of II (R = R1 =

SiMe3) at low temps. to II (R = H, R1 = SiMe3) followed by oxidative cleavage of C-Si bond with Pb(O2CCF3)4 gave estrone (prepared in 5 steps and

21.5% yield from 2-methylcyclopent-2-en-1-one and 6 steps and 15.1% yield

from $\mbox{HC.tplbond.C(CH2)2C.tplbond.CH)}$. There was a slight improvement of

the yields via cyclization of the ethylene ketal of I (23.1 and 16.2%, resp.).

IT 74384-70-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation and hydrolysis of)

RN 74384-70-6 CAPLUS

CN 2H-Cyclopenta[b]furan, 6a,6'a-[1,2-ethanediylbis(oxy)]bis[4-ethenylhexahydro-3a-methyl- (9CI) (CA INDEX NAME)

CC 32-3 (Steroids)

IT 69505-08-4P 69505-09-5P 72938-90-0P 74384-70-6P

74384-71-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(preparation and hydrolysis of)

L5 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1980:407389 CAPLUS

DOCUMENT NUMBER:

93:7389

TITLE:

Structural effects on the hemiacetalization of

2-(hydroxyalkyl)cyclanones

AUTHOR(S):

Cazaux, Michel; De Jeso, Bernard

CORPORATE SOURCE:

Lab. Chim. Appl., Ec. Natl. Super. Chim. Bordeaux,

Talence, 33405, Fr.

SOURCE:

Comptes Rendus des Seances de l'Academie des

Sciences,

Serie C: Sciences Chimiques (1980), 290(2),

49-51

CODEN: CHDCAQ; ISSN: 0567-6541

DOCUMENT TYPE:

Journal

LANGUAGE:

French

GI

AΒ An NMR study of the ring-chain tautomerism of cyclic ketols, e.g., I .dblharw. II, indicates that the ring size of both the starting cycloalkanone and the heterocyclic compound influence the equilibrium Thus, a

cyclopentanone derivative favors the monocyclic forms; the cyclohexanone

derivative leads more easily to the hemiacetal. Also, a THF derivative is formed

with more difficulty than the tetrahydropyran derivative ΙT 73859-58-2 73859-59-3

RL: RCT (Reactant); RACT (Reactant or reagent) (ring opening of, NMR in relation to)

RN 73859-58-2 CAPLUS

CN 6aH-Cyclopenta[b]furan-6a-ol, hexahydro- (9CI) (CA INDEX NAME)

RN 73859-59-3 CAPLUS CN6aH-Cyclopenta[b] furan-6a-ol, hexahydro-2-methyl- (9CI) (CA INDEX NAME)

CC 22-6 (Physical Organic Chemistry)

IT 13377-10-1 57133-57-0 73859-58-2 73859-59-3

73859-60-6 73859-61-7

RL: RCT (Reactant); RACT (Reactant or reagent) (ring opening of, NMR in relation to)

ANSWER 22 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:508248 CAPLUS

DOCUMENT NUMBER: 89:108248

TITLE: Competitive thermal and photochemical processes in

cyclopropyl ketone rearrangements. I. Photolysis

of

spiro[n.2]alkan-2-ones

Lee-Ruff, Edward; Khazanie, Prabhakar Govind AUTHOR(S): CORPORATE SOURCE: Dep. Chem., York Univ., Downsview, ON, Can.

SOURCE:

Canadian Journal of Chemistry (1978), 56(6),

803-7

CODEN: CJCHAG; ISSN: 0008-4042

DOCUMENT TYPE:

LANGUAGE:

Journal English

GΙ

 R^1 Ι ΙI

AΒ Irradiation of spiroketones I (R = H, R1 = Me; R = Me, R1 = H) in MeOH gave

mainly products of type I reaction, whereas I (R = R1 = Me) and II (R = R1 = Me)Me, R1 = H; R = R1 = Me) gave type II products. Formation of type II products can arise by 2 different mechanisms. One involves the intermediacy of a dienol which can be trapped with MeOD. Photochem. degradation of the cyclopentanones was slower than that of the

corresponding

cyclohexanones.

ΙT 66806-66-4P

> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 66806-66-4 CAPLUS

CN 6aH-Cyclopenta[b] furan-6a-ol, hexahydro-2,2-dimethyl- (9CI) (CA INDEX NAME)

НО Me Me

CC 24-4 (Alicyclic Compounds)

IΤ 1193-70-0P 4187-81-9P 4668-64-8P 16429-05-3P 57133-52-5P

57133-54-7P 66806-64-2P 66806-65-3P 66806-66-4P

66806-67-5P 66806-68-6P 66806-69-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

ANSWER 23 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1974:491787 CAPLUS

DOCUMENT NUMBER:

81:91787

TITLE:

9,11-Seco steroids derived from estradiol 3-methyl

ether

AUTHOR(S): Dygos, John H.; Chinn, Leland J.

CORPORATE SOURCE: Dep. Chem. Res., Searle Lab., Chicago, IL, USA SOURCE: Journal of Organic Chemistry (1973), 38(25),

4319-24

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB 9,11-Secosteroids I (RR1 = 0; R = H0, R1 = HC.tplbond.C) were prepared from

estradiol 3-methyl ether. A key step was the stereoselective addition of

HC.tplbond.CMgBr to the more hindered side of I (RR1 = 0). Addition of HC.tplbond.CMgBr to cyclic ketal II yielded secopregnyne III. I (RR1 = 0)

possessed weak estrogenic activity and II possessed antifertility activity

without having estrogenic activity.

IT 42151-20-2P

RN

RL: BAC (Biological activity or effector, except adverse); BSU (Biological $\,$

42151-20-2 CAPLUS

CN 6aH-Cyclopenta[b]furan-6a-ol, hexahydro-4-(6-methoxy-2-naphthalenyl)-2,2,3a-trimethyl-, [3aS-(3a α ,4 α ,6a α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

CC 32-3 (Steroids)

IT 42151-20-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and antifertility activity of)

L5 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 1973:57821 CAPLUS

DOCUMENT NUMBER:

78:57821

TITLE:

SOURCE:

Design of prostaglandin synthesis

AUTHOR(S):

Brewster, D.; Myers, M.; Ormerod, J.; Spinner, M.

E.;

Turner, S.; Smith, A. C. B.

CORPORATE SOURCE:

Pharm. Div., Reckitt and Colman, Hull, UK Journal of the Chemical Society, Chemical Communications (1972), (22), 1235-6

CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 78:57821

GI For diagram(s), see printed CA Issue.

AΒ Prostaglandin $F2\alpha$ (I) was prepared in 13 steps from

endo-dicyclopentadiene which was converted to the bicyclo[3.3.0]octane derivs. (II, R = CHO, CO2H, Ac; III, R = Ac, R1 = OH, OAc; R = R1 =

OAc,

OH) and hence to the enone (IV). Protection as the CC13CH2 derivative, reduction,

acetylation, and deprotection followed by a Wittig reaction and deacetylation gave I and its 15-epimer.

IT 39762-81-7P

> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

39762-81-7 CAPLUS RN

CN 2H-Cyclopenta[b] furan-4-carboxaldehyde,

hexahydro-2,3a,5,6a-tetrahydroxy-

(9CI) (CA INDEX NAME)

CC 24-4 (Alicyclic Compounds)

IT 23518-25-4P 39762-23-7P 39762-24-8P 39762-25-9P 39762-26-0P 39762-27-1P 39762-28-2P 39762-29-3P 39762-30-6P 39762-31-7P 39762-32-8P 39762-34-0P 39762-35-1P 39762-37-3P 39762-81-7P

39873-34-2P 61121-09-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L5ANSWER 25 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1971:498715 CAPLUS

DOCUMENT NUMBER:

75:98715

TITLE:

Peracid oxidation of dl-3-methoxy-8,14-secoestra-

1,3,5(10),9(11)-tetraene-3,17-dione

AUTHOR(S):

Daniewski, A. R.; Guzewska, M.; Kocor, M.; Baran,

J.

S.

CORPORATE SOURCE:

SOURCE: Serie Inst. Org. Chem., Pol. Acad. Sci., Warsaw, Pol. Bulletin de l'Academie Polonaise des Sciences,

des Sciences Chimiques (1971), 19(5), 313-16

CODEN: BAPCAQ; ISSN: 0001-4095

DOCUMENT TYPE:

LANGUAGE:

Journal English

GI For diagram(s), see printed CA Issue.

AB (±)-11,14α-Epoxy-14β-hydroxy-3-methoxy-8,14-secoestra1,3,5(10),8-tetraen-17-one (I) is prepared by the per acid oxidation of (±)-II. Thus, (±)-II is treated with m-chloroperbenzoic acid to give I. I is treated with BF3 etherate to give (±)-III. (±)-II is treated with H2O2 in the presence of PhCN to give (±)-IV. NMR spectra data are given for I, III and IV.

IT 24432-10-8P

RN 24432-10-8 CAPLUS

CN 8,14-Secoestra-1,3,5(10),8-tetraen-17 β -ol, 11,14 α -epoxy-3,14-dimethoxy-, acetate (8CI) (CA INDEX NAME)

CC 32 (Steroids)

IT 250-49-7DP, 2H-Cyclopenta[b] furan, steroid derivs. 24421-61-2P 24432-09-5P 24432-10-8P 30041-28-2P 33610-66-1P

33610-67-2P 33710-45-1P 51270-58-7P

L5 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1970:476454 CAPLUS

DOCUMENT NUMBER:

73:76454

TITLE:

Molecular photochemistry. XXVII. Photochemical

ring

expansion of cyclobutanone, substituted cyclobutanones, and related cyclic ketones Morton, Douglas R.; Lee-Ruff, Edward; Southam,

AUTHOR(S): Richard

M.; Turro, Nicholas J.

CORPORATE SOURCE:

Chem. Dep., Columbia Univ., New York, NY, USA

SOURCE: Journal of the American Chemical Society (1970)

), 92(14), 4349-57

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 73:76454
GI For diagram(s), see printed CA Issue.

AB The photochem. reactions of substituted cyclobutanones in MeOH are reported. Cyclobutanone, for example, yields 2-methoxytetrahydrofuran

via

an initial α -cleavage to give the most stable 1,4-acyl alkyl diradical which undergoes subsequent or concerted rearrangement and rebonding to the corresponding oxacarbene intermediate. Oxacarbenes

are

intermediates in these photolyses, and related systems which undergo

ring

are

expansion (e.g., benzocyclobutene-1,2-dione, cyclocamphanone, and I)

compared.

IT 29921-84-4P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 29921-84-4 CAPLUS

CN 2H-Cyclopenta[b] furan, hexahydro-6a-methoxy-2,2-dimethyl- (8CI) (CA INDEX

NAME)

CC 22 (Physical Organic Chemistry)

ΙT 4237-83-6P 13436-45-8P 17546-39-3P 17628-40-9P 17628-41-0P 17636-99-6P 22566-27-4P 22566-30-9P 22566-33-2P 24186-30-9P 24186-31-0P 24186-33-2P 29916-03**-**8P 29916-04-9P 29916-05-0P 29916-06-1P 29916-07-2P 29916-08-3P 29916-09-4P 29916-10-7P

29921-78-6P 29921-84-4P 29921-89-9P

L5 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1970:13001 CAPLUS

DOCUMENT NUMBER: 72:13001

TITLE: $11,14\alpha$ -Epoxy-8,14-Secogona-1,3,5(10),8-tetraenes

INVENTOR(S): Baran, John S. PATENT ASSIGNEE(S): G.D. Searle and Co.

SOURCE: U.S., 3 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PRIORITY APPLN. INFO.:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3476773 -	A	19691104	US 1967-663527	19670828

<--

US 1967-663527

A 19670828

AB Epoxidn. of

3-methoxy-8,14-secoestra-1,3,5(10),9(11)-tetraene-14,17-dione in CHCl3 at 10° with m-chloroperbenzoic acid 15 min gave $dl-11,14\alpha$ -epoxy-14 β -hydroxy-3-methoxy-8,14-secoestra-1,3,5(10),8-tetraen-17-one (I), m. $156-7^{\circ}$ (Me2CO-hexane).

MeOH with p-MeC6H4SO3H at room temperature 16 hr afforded $dl-11,14\alpha$ -epoxy-

 $3,14\beta$ -dimethoxy-8,14-secoestra-1,3,5-(10),8-tetraen-17-one (II). Reduction of II in tetrahydrofuran with LiAl(OBu-tert)3H at room temperature 15 min

gave $dl-11,14\alpha$ -epoxy-8,14-secoestra-1,3,5(10),8-tetraene- $3,14\beta,1$ 7β -triol 3,14- dimethyl ether, which on acetylation gave the 17-acetate.

IT 24432-10-8P

> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 24432-10-8 CAPLUS

CN 8,14-Secoestra-1,3,5(10),8-tetraen-17 β -ol, 11,14 α -epoxy-3,14dimethoxy-, acetate (8CI) (CA INDEX NAME)

IC C07D; A61K INCL 260346200 CC 32 (Steroids)

IT 24421-61-2P 24432-09-5P 24432-10-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

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